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ABSTRACT

This handbook, which is based on a self-directed format, is written for adult education specialists, curriculum designers, and learning facilitators who want to help adult workers develop the basic skills needed for improved job performance. Discussed in part 1 are reasons for teaching basic skills in the workplace, considerations in developing effective workplace education programs, and a curriculum development model that views basic skills analysis and curriculum design as critical elements of creating a viable workforce education program. Part 2 deals with the process of conducting a basic skills analysis. It includes four case studies illustrating various steps of the skill analysis process: interviewing contact persons and employees, gathering data and workplace print materials, determining core competencies, and creating and completing a basic skills task analysis. Part 3 examines the steps in developing workplace curricula: developing a curriculum design, writing instructional goals, evaluating entry behaviors of learners, selecting learning activities, and writing lesson plans. Four case studies devoted to creating customized curriculum materials are included. Contains 11 references. Appended are answers to the case studies and a list of 21 selected student workplace texts and 54 books and government documents about literacy. (MN)

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ED 382 826

# Basic Skills Needs Analysis and Curriculum Design for the Workplace

*A Self-Study Handbook*

*Prepared by*
***Lucy Guglielmino***
***Deborah Long***
***Linda Mrowicki***

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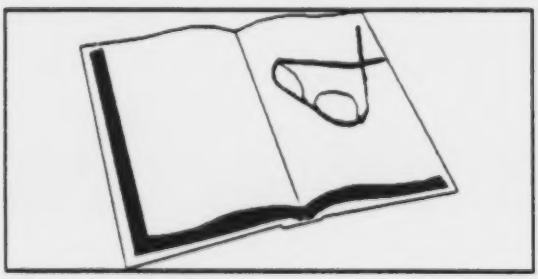
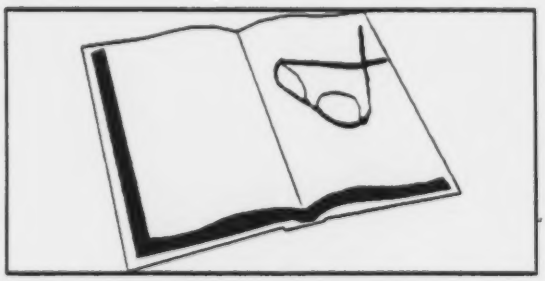
*"Experts estimate that anywhere from 20 million to 80 million American adults are functionally illiterate, depending on how one defines the term. Millions more Americans, perhaps as many as half of the adult workforce, do not read, write, or compute well enough to perform their jobs satisfactorily."*

*--Donald J. Ford*
***Training and Development**, November, 1992*



*"23 million American workers--or 20% of the U.S. workforce--read at no better than an eighth grade comprehension level."*

*--Business Council for Effective Literacy*



*The cost of inadequate basic skills in welfare payments, crime and incarceration, incompetence on the job, lost taxes, and remedial education is estimated at $225 billion per year by the American Library Association.*

***A Florida Literacy Coalition Project***

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The Florida Literacy Coalition served as fiscal agent for the project. Anita Rodgers, Executive Director, and Theresa Coral offered valuable assistance.

Several corporations contributed immeasurably to the project by allowing workshop participants to be involved in the on-site interviews and materials collection which are the most vital element in basic skills needs analysis. These companies are the Sandestin Resort and Conference Center, Destin, Florida; Dobbs International, Tampa, Florida; and C-MAC Corporation, West Palm Beach, Florida. Special thanks are due the individuals at the Sandestin who allowed their interviews to be videotaped to provide the simulation exercises incorporated into this material: Sylvia Bell, Human Resources Director; Robbie Acosta, Golf Course Superintendent; and Joe Hamilton, Equipment Operator.

The videotape was produced through a cooperative effort with another state grant funded to Pensacola Community College and directed by Dr. James Grant. WSRE-TV, Karen Claugherty, and Elizabeth Watkins were instrumental in making the videotape a reality.

Linda Mrowicki, major consultant for the workshops, was a delight. She willingly shared her expertise born of years of hands-on experience in developing workforce education programs, going beyond the contract to meet the need.

Deborah Long applied her sharp intellect and excellent computer skills to the project with her usual gusto, contributing both substance and style.

Working with this group of dedicated professionals made the development of this publication a pleasure.

*Lucy M. Guglielmino, Director*
*Workforce Education Cooperative Training*
*and Dissemination Project*

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# Foreword

This handbook is written for adult education specialists, curriculum designers, and learning facilitators who wish to assist adult workers in developing the reading, writing, mathematics and language skills needed for enhanced job performance.

The increasing need for workforce education has been dealt with extensively in academic and popular literature. Some advocate a generic approach to basic skills education, arguing that a job-specific approach is not as transferable. This handbook is based on a very different position. Over the years, many non-customized workforce education programs have rapidly lost participants and been discontinued because they were not perceived to be relevant and productive by workers and employers.

Relevance has always been the key to successful adult and community education, and relevance is the ingredient that makes customized workforce education programs so successful. Workers know that what they are learning can be applied immediately on their jobs; and employers know that improved performance, reduced turnover and enhanced promotability will be among the gains realized. Successful learning leads to continued learning.

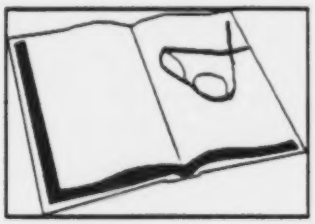
This handbook focuses on two elements of workforce education design for basic skills instruction:

1. **performing a basic skills needs analysis to identify the specific reading, writing, mathematics and language skills needed; and**

2. **designing a customized curriculum based on that analysis.**

The program model found on page 8 of this handbook indicates that basic skills analysis and curriculum design are two critical elements of creating a viable workforce education program. However, several chapters of introduction to the nature of the basic skills problem and the overall design of workforce education are included in this handbook. In addition, a selected reading list can be found in the appendix.

The self-directed format of this handbook permits the reader to develop a basic skills task analysis and curriculum. As a supplement, a videotape program provides an actual workplace example in which you will have an opportunity to practice your newly-gained skills. Suggested responses immediately follow the exercises, and suggested answers to the case studies can be found in the appendix.



# Introduction to Workforce Education

# Why Teach Basic Skills in the Workplace?

Just how serious is the basic skills problem? In a recent issue of *Phi Delta Kappan* (December, 1990), Larry Mikulecky offered startling statistics: 40% of young adults tested could not decipher a typical newspaper article. Sixty percent could not summarize an article's points in writing. Thirty percent of adults tested could not write a simple business letter. Sixty to eighty percent of school dropouts could not write a letter. Experts estimate that anywhere from 20 million to 80 million American adults lack a sufficient level of basic skills to function effectively in society (Ford, 1992).

Many of these individuals are employed, but are not performing well because they lack the basic communication and computation skills required to perform the day-to-day operations of a job. The ability of workers to make change, to read an employee bulletin board, and to follow oral and written directions concerns employers because of direct connections to work, to quality, and to job performance.

Mikulecky (1990) states that employers currently provide at least 17.6 million basic skills courses each year to 15 million workers. Corporations spend about $30 billion a year on these programs. The cost of low basic skill levels is high: up to $225 billion annually if lost productivity and remedial training as well as related costs such as welfare payments, crime and incarceration, and low taxes related to low basic skills are actually included.

With increasing technological advances and foreign competition, these expenditures are likely to increase: companies are finding that many more employees are functionally illiterate due to increasing skill level requirements and the elimination of many unskilled jobs. While average Americans may be able to function at a reasonable level of success with a 6th grade reading ability, most workers today must be able to read on the 10th to 12th grade level or higher (*ERIC Digest*, No. 70).

Just a decade ago, relatively low-level skills were needed to acquire a job. Today higher level skills are needed to keep the job: communication skills, comprehension skills, computational ability. Employers also require personal management skills, ethics, and vocabulary maturity. The American Society for Training and Development also notes that employers seek "economic adaptability," including problem solving, learning, employability and career development, as well as group and organizational effectiveness.

These higher level skills are essential to the success of American industry. Yet in a recent report, the Center for Public Resources stated that an average of 45% of business personnel were functioning at only low or medium levels of performance.

Because adequate basic skills are essential to the success of the employer and employees, many companies are providing basic skills classes on site.

## Why Do We Need Basic Skills Programs for Workers?

In addition to improving the personal quality of life for the worker, basic skills programs also improve the worker's professional life. Workforce education problems can help employees avoid some of the problems that are linked to low levels of basic skills. For example:

- accidents and personal injuries because employees are unable to read warning signs or safety procedures;
- equipment malfunctions and breakdowns because employees cannot read and understand instruction booklets, technical manuals, and in some cases, even simple job aids;
- high turnover rates and absenteeism because of the inability to function adequately on the job;
- poor product quality because of errors and misunderstanding of procedures; or
- customer complaints because workers cannot fill the customer's orders.

The cost to the individual worker with low levels of basic skills can also be measured in terms of lost income. It is estimated that the average annual income for a high school graduate is nearly more than *200% higher* than the income of a high school dropout (*1993 Florida Tax Watch*). The personal cost is not so easily equated to dollars and cents, but it is no less real; inadequate levels of basic skills result in frustration, low self-esteem and an inability to progress on the job or find better employment.

See the following page for a list of job-related basic skills considered critical for workforce education today.

**A Universal List of Job-Related Basic Skills**
**Compiled by American Society for Training and Development**

| | |
|---|---|
| **Knowing how to learn:** | The key skill. It is the capability to acquire more sophisticated skills when necessary. |
| | **The Three R's** |
| --Reading | The ability to read analytically, summarize information, and monitor one's own comprehension of the reading task. |
| --Writing | The ability to write analytically, conceptualize, synthesize, distill information, and articulate points and proposals early and succinctly. |
| --Mathematics | The ability to apply math education in the workplace by identifying problems, reasoning about them, and solving them. |
| | **Communication** |
| --Oral | The ability to apply appropriate voice inflection and body language to the workplace situation. |
| --Listening | Abilities to listen for content, listen for conversation, listen for long-term context, listen for emotional meaning, and listen to follow directions. |
| | **Adaptability** |
| --Problem solving | The ability to recognize and define problems, invent and implement solutions, and track and evaluate results. |
| --Creative thinking | The ability to go beyond logical, sequential thinking and apply divergent thinking in order to find connections between seemingly unrelated ideas. |

**Personal Management**

| | |
|---|---|
| --Self-esteem | The ability of individuals to recognize their current skills, remain aware of their impact on others, deal with stress, deal with change, deal with criticism, and deal with their own limitations. |
| --Goal setting/ motivation | The ability to establish and meet defined objectives. |
| --Personal and career development | The ability to establish and meet personal and career goals. |

**Group Effectiveness**

| | |
|---|---|
| --Interpersonal skills | The ability to judge and balance appropriate behavior, cope with undesirable behavior by others, absorb stress, deal with ambiguity, listen to others, inspire confidence in others, structure social interaction, share responsibility, and interact easily with others. |
| --Negotiation | The ability to separate people from problems, focus on interest and not positions, invest options for mutual gain, and insist on use of objective criteria in decision-making. |
| --Teamwork | The ability to recognize different personalities in a team, cope with these differences, understand small groups, and understand technical skills brought to the team by each of its members. |

**Influence**

| | |
|---|---|
| --Organizational effectiveness | The ability to understand an organization. |
| --Leadership | The ability to influence others and understand the nature of social exchange between leaders and followers in leadership situations. |

This list was adapted by Dr. William J. Rothwell and Dr. Dale C. Brandenburg from Carnevale, A., Gainer, L. & Meltzer, A. (1988). *Workplace Basics: The Skills Employers Want.* Alexandria, VA: The American Society for Training and Development and the U.S. Department of Labor, Employment and Training Administration. (Permission from HRD Press to use this adapted list pending.)

## Workforce Education Programs

The final report of the Project on Adult Literacy described the low basic skills of our workforce as the nation's "most seriously neglected national priority" (Chrisman, 1989). Emphasizing that 20 to 30 million individuals have basic skills deficiencies severe enough to affect their job performance, the report recommends making remedial programs available to workers on the job site.

What are the advantages of offering basic skills programs at the workplace?

- *Reducing the cost for the employer.* Employers often provide the training site and a company liaison who assists with the basic skills needs analysis. By offering the program on site, the company often receives a literacy program tailor-made to its needs.

- *Reducing the cost for the adult education provider.* By using the resources of the employer, publicly-funded adult education agencies economize on their own resources.

- *Creating a more educative environment on the job.* By sponsoring and promoting workforce education programs, a company creates an atmosphere where learning is reinforced and perceived as practical, positive, and productive.

- *Increasing the possibilities for transfer and immediate use of knowledge.* Adult workers demonstrate more interest and effort when new knowledge can be applied immediately to an important context. Equally important, new skills create more work promotion opportunities.

- *Eliminating barriers to attendance.* Transportation, child care, and fees are often mentioned as reasons for not attending literacy programs at school sites. When programs are offered at work, these barriers are eliminated. Also, fellow workers provide each other support when they study together.

## Developing Effective Workplace Education Programs

Once an employer has decided to implement a workforce education program, several approaches become available:

1. Personnel within the company, such as training coordinators, can design and deliver the program.

2. Consultants can be brought in to design and deliver the program or to train company personnel to deliver it.

3. Local education providers can work with company personnel to develop and provide the instruction.

The third approach has significant advantages to both parties: first, the instructional staff will be available at no cost since basic skills programs receive state funding; and two, teachers will be experienced in adult basic skills education.

The curriculum development model on the next page is based on the cooperative nature of the third approach.

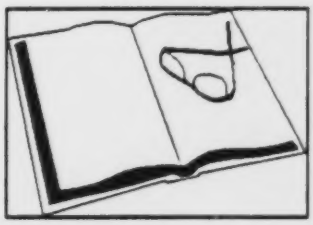
# The Curriculum Development Model

Please note that the model given below includes evaluation and feedback after each step, with the option of reassessing prior decisions. For example, after the basic skills needs assessment is conducted, the preliminary program goals may be altered.

- Establish joint planning and implementation team.
- Develop preliminary program goals and target audience(s).
- Agree on responsibilities of the partners.
- **Conduct the basic skills needs analysis.**
  - **conduct basic skills task analysis**
  - **assess the workforce**
- **Develop specific program objectives.**
- **Design the curriculum.**
- Recruit participants.
- Screen and counsel participants.
- Select and train teachers.
- Deliver instruction.

Evaluate and provide feedback

Reprinted by permission of Florida Atlantic University Adult Education Office. Lucy Madsen Guglielmino. (1991). *Proceedings of the Florida Workplace Literacy Conference*, Jacksonville, Florida, page 9.



## Basic Skills Needs Analysis

## Basic Skills Needs Analysis

The purpose of this handbook is to develop the ability to perform a basic skills needs analysis and to adapt or design curricular materials based on that analysis. These processes are presented by the shaded boxes in the development model on the preceding pages and are the central steps in determining what actually goes on in the classroom and how effective it is.

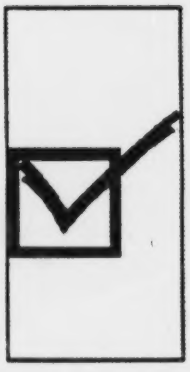
A basic skills needs analysis examines both the job and the employees in terms of basic skills. It has two major parts:

1. determination of the basic skills needed to perform the specific job tasks and to function as an independent employee (basic skills task identification); and

2. determination of the current level of basic skills of the employees doing that job (basic skills needs assessment).

The focus of this training handbook is on the basic skills task identification. It involves interviewing of workers and other key personnel to gather information about the basic skills that workers need to perform their jobs; observing workers and identifying their basic skills; and collecting and analyzing written materials. These steps are described on the next two pages.

**A basic skills needs analysis includes:**



1. **a basic skills task identification:** determination of the basic skills needed to perform specific job task and to function as an independent employee

2. **an employee basic skills needs assessment:** determination of the current level of basic skills of employees who will participate in the program

## Steps in a Basic Skills Needs Analysis

*The Bottom Line* suggests these five steps in performing a basic skills needs analysis:

1. Observe the employee(s) to determine the basic skills they must use in order to perform their jobs effectively.

   - Watch the employee(s) through a workday to be sure all tasks are observed. Continue this observation over a period of time if tasks change periodically rather than daily.
   - Record each time the worker reads, writes, or does an arithmetic calculation.
   - Note the materials used by the employee to perform the tasks involving basis skills activities.
   - Determine the purpose of those tasks.
   - Be aware of whether the tasks are performed individually or in groups.

2. Collect all materials that are written and read on the job to determine the degree of skill proficiency an employee must have to do the job well.

   - Include memoranda, telephone messages, manuals, bills of sale, and forms such as inventory lists, balance sheets, and requisition slips.
   - Examine materials to determine reading levels, necessary vocabulary, and style.
   - Analyze the content of these materials to determine their function.

3. Interview employees and their supervisors to determine their perception of the basic skills needed to do their jobs.

   - Note the skills that the top-performing employees say are most important.
   - Ask the supervisors which skills are needed for job performance, identifying those deemed critical.
   - Examine discrepancies, if they exist, between the employees' and the supervisors' perceptions of skills needed. One particularly good technique suggested by Mikulecky (1987) is to ask both supervisors and top-performing employees how they would break in a new employee, step by step. Questions such as "How do you decide what to do first? How do you decide what to do next?" clarify the mental processes underlying good job performance and present a fuller picture than a simple listing of tasks.

4. Determine whether the employees have the basic skills needed to do their jobs well.

   - Combine the information gathered from observing the employees, collecting the materials they use, and the interview. Then write up a description of each of the jobs in terms of the reading, writing, and computation skills needed to perform them well.
   - Return to the work setting to observe how or whether the tasks requiring these basic skills are performed.
   - Discuss observations informally with employees and supervisors when problems are observed, to pinpoint specific areas of difficulty and concern.

5. Build tests that ask questions relating specifically to employees' job or job group.

   - Use job-related language and style.
   - Use situations and formats in which the basic skills being tested will actually occur.
   - Ask employees to perform the tasks that simulate what they encounter on the job.

By comparing the results of the test with the writeup of the basic skills tasks embedded in the job(s), the basic skills task analysis can determine whether there is a basic skills problem in the workplace and what that problem is.

Adapted from *The Bottom Line: Basic Skills in the Workplace*. Washington, D.C.: United States Department of Education, 1988, pp. 14-15.

## Preparing for a Basic Skills Needs Analysis

Jorie Philippi in *Literacy at Work: The Workbook for Program Developers*, suggests four necessary steps for preparing to conduct a basic skills needs analysis.

You should:

- Schedule times for job-site visits with competent workers through supervisors or managers. Request that you may observe and interview several workers as they perform a critical job task. Each basic skills needs analysis should require spending approximately 30 minutes with each worker.

- Request and review job descriptions and requirements for the positions of the workers you will interview and observe. Ask supervisors, training managers, and personnel directors for these materials. If possible, obtain similar information for job titles directly under and above those you will analyze for critical job tasks. This enables you to determine the sequence of skills and what additional skills are necessary for competent performance after promotion to advanced positions.

- Request and preview available training materials, manuals, job aids, and so on, used by workers you will interview and observe. Ask training managers and supervisors for these materials. The content, the various formats, and the difficulty levels of texts and technical concepts will help you formulate questions to ask during the basic skills needs analysis about the frequency of use, processes for accessing information, and the uses for information the materials contain during task performance.

- Familiarize yourself with some of the basic skills applications you are likely to find embedded in the performance of critical job tasks.

## Conducting the Interviews

One of the most common methods for gathering data for the basic skills needs analysis is to interview a variety of people who work for the company. The purpose of these interviews is to find out information about the company (its products, services, and operations) and its workforce (for example, ages, levels of education).

Because conducting an interview is more complicated than the other methods of gathering data (e.g., questionnaire or checklist, diary, or observation), it is worthwhile to examine interviewing more closely as a basic skills needs analysis technique.

Each contact person interviewed offers a different perspective of the company. Each person can provide different information about the company; for example, the personnel director's perspective is rather broad. A personnel director often deals with the company's procedures and policies regarding areas such as hiring, firing, pay and benefits, vacations and sick leave. He or she can provide samples of the reading materials which are important for workers to master (such as insurance forms).

A union official, on the other hand, has a more focused perspective. The union official is concerned with employee needs and the role of the union in fulfilling those needs. A union official can provide valuable information about workers' concerns about training and evaluation.

A production manager's perspective is different from the personnel director's or the union official's. The production manager focuses on making sure that work is being done efficiently. This key individual can provide information about general basic skills necessary to complete the work and can often target specific jobs or groups of jobs where basic skills deficiencies may be interfering with performance.

A direct supervisor focuses on the tasks of the job and has an opportunity to see the workers daily. The supervisor will know which workers have the greatest need for basic work skills.

Read the following pages for examples of interview questions that might be asked of key personnel.

# Interviews with Contact Persons

| TITLE | PERSPECTIVE | SAMPLE QUESTIONS |
|---|---|---|
| PERSONNEL DIRECTOR | Broad Policy-oriented | Do applicants have the necessary basic skills to perform the job once hired?<br><br>Do employees have trouble reading insurance information, or filling out applications and claim forms?<br><br>Do employees need help understanding company manuals regarding sick time, benefits, etc.?<br><br>Do employees have difficulty calculating wages or figuring out deductions from their paycheck?<br><br>How do basic skills levels affect hiring and promotability? |
| TRAINING DIRECTOR | Training issues; learner characteristics: learning needs; | What is the company philosophy regarding basic skills training?<br><br>Is there a basic skills program in effect?<br><br>What other training is currently going on?<br><br>What difficulties do workers have in current training programs?<br><br>What is the reading level of your average-entry level worker?<br><br>What special training needs do workers have?<br><br>What is the age range of workers? |

| | | |
|---|---|---|
| DIRECT SUPERVISOR | Focused on tasks of job; sees workers' daily needs | How is plant productivity affected by workers' abilities in reading, writing and math?<br><br>In which entry-level jobs do workers seem to have the greatest need for basic skills?<br><br>Do you have workers you'd like to promote but feel they can't handle the basic skills requirements of a higher-level job? |
| UNION OFFICIAL | Employee needs; Management issues | What is the relationship between management and workers?<br><br>What role does the union play in training and basic skills education?<br><br>What printed materials should workers read to be informed of their rights and responsibilities and of union services and issues?<br><br>What previous problems ever undercut training programs? |

Adapted from material written by R. Drew and L. Mikulecky in *How to Gather and Develop Job Specific Literacy Materials for Basic Skills Instruction*. Bloomington: Indiana University, Bloomington School of Education (ERIC Doc. Rep. No. ED 297160) and presented at the Workforce Literacy Task Analysis and Curriculum Adaptation Workshop, May 17-19, 1993, West Palm Beach, Florida.

# Interview Questions for Employees

**BACKGROUND**
What is your title and job description?
How long have you been in this job?
How did you learn this job?
What special training did you have for this job?
How important is reading to the successful completion of your job?
How important is writing to the successful completion of your job?
How important is math to the successful completion of your job?
What do you find the most important part of your job?
What could go wrong if you didn't do this part of your job correctly?

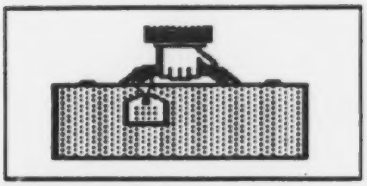
**BASIC SKILLS REQUIREMENTS OF JOB**
Will you please show me the books, manuals, forms or charts you read in order to do your job?
Which of these is hardest to read?
How often do you use this manual (chart, form, et cetera) in doing your job?
If you were training a new person to do this part of your job, what would he or she have to know before you could teach him/her?
What would a new person find most challenging about learning your job?
What reports, memos, summaries or other written messages do you read or write in your job?
What math or science skills do you use in your job?
What technical equipment do you use in your job?
What computer equipment (or computerized machines and tools) do you use in your job?

**TRAINING AND PROMOTABILITY**
In which parts of your job would you like to improve?
What skills would you need to learning in order to be promoted to a different or better job?
Are you currently being trained (or are you training someone new) to do this job?
What is most difficult about the training you are in now?
How has your job changed since you first started it?
Do you expect to be going back to school or training in this or another job?
Will you please show me the training manuals and exercises which are most difficult for you?

**PROBLEM SOLVING (METACOGNITION)**
Explain what information you are looking for when you read this manual (form, chart, etc)?
Tell me, step by step, how you get information from this manual (etc.).
Tell me, step by step, how you got the information when you were new on the job.
Show me how you know...
Explain in detail...
How did you know to do that?
How did you learn that part of your job?
What did you do first, second, third, et cetera?
What do you do if you don't find what you are looking for the first time?
Where else could you go for this information?

These questions are taken from Drew, R. and Mikulecky, L. *How to Gather and Develop Job Specific Literacy Materials for Basic Skills Instrucuon*, Spring 1988 and found in *Workplace Literacy: A Resource Book* by Lucy M. Guglielmino and Valerie C. Bryan.

## Case Study #1
## Preparing an Interview Plan



Wooly Winter Catalog Company is a large clothing catalog company. Most of their business orders are made by phone. Customers call on a national 1-800 telephone line and talk to a service representative who takes their order, their billing address, and their shipping address. The representative then keys the information into a computer which calculates the charges and prints out the order. There are 20 service representatives.

Wooly Winter Catalog Company has a shipping department with 12 full-time employees. Shippers must process the orders taken by the service representatives and box and label the orders appropriately. Shippers must also identify weight and appropriate postage necessary.

This company also has an inventory department whose workers must receive, identify and organize stock.

Most of the positions at this company can be described as entry level. The minimum education accepted is a high school degree. Many of the employees speak English as a second language. Many are recently hired employees and this is their first job after graduating. Each new employee receives several hours of training in how to use the computer to take, receive, and process orders.

What key personnel might you want to interview to obtain more specific information about the company, its workforce, and potential problems?

What questions would you ask the plant manager of this firm?

What perspective would the plant manager have that other personnel at Wooly Winter Catalog Company might not have?

What questions would you ask the direct supervisor of the customer representatives?

What perspective would the direct supervisor of the service representatives have that other personnel at Wooly Winter Catalog Company might not have?

What questions would you ask the employees of this firm?

What perspective would the employees have that the supervisory personnel at Wooly Winter Catalog Company might not have?

Suggested answers to case study questions may be found at the end of this handbook.

## Gathering Data for the Basic Skills Needs Analysis

A number of valuable resources for your basic skills needs analysis may already be available in the workplace. Among these are:

- job task identification results (a listing of specific tasks involved in performing a job);
- job descriptions; and/or
- job task lists or competency checklists.

The following information is an example of a basic skills task identification for the job of coining welds:

> 1. Read instruction card. 2. Read tag on stack of wires received from welder and match job number. 3. Measure thickness of wire with micrometer and match to thickness noted on instruction card. 4. Put about 50 wires in front of you. 5. Brush grease on weld. 6. Place wire on 2 grooves of the die, centering the weld. 7. Press pedal 4 times which stamps die. Turn wire so you hit all surfaces. 8. Pick wire up in left hand, checking by feel for smoothness of coin. 9. Repeat above until stack of wires in completed. 10. Band together group of 50 wires and write clock number and welder's clock number on a tag. 11. Clean die two times per hour. 12. Verbally report to supervisor the number of wires coined.

(Adapted from *A Basic Skills Curriculum for the Manufacturing Industry*)

If a job task analysis, such as the one above, is already available, you can immediately focus your attention on the reading, writing, math and language skills needed to perform the job task.

For example, the 12 directions listed in the task identification above involve the following core basic skills:

- reading for literal comprehension
- reading technical words and non-technical words
- scanning for information
- matching alpha-numeric code
- reading up to three place decimals
- matching numbers
- counting
- writing numbers

Organizing information about basic skills tasks with basic skills competencies can be helpful:

| Job Task | Basic Task | Basic Skills Competency |
|---|---|---|
| #1 | Read a basic list of instructions | Read for literal comprehension<br>Read technical words and non-technical words |
| #2 | Read a label | Scan for information<br>Match alpha-numeric code |
| #3 | Measure in metric system | Read up to three-place decimals |
| | Read a basic list of instructions | Scan for information<br>Match numbers |

(Adapted from *A Basic Skills Curriculum for the Manufacturing Industry.*)

If a task analysis is not available, you will need to gather that information. The data for task analysis can be collected in one of five ways:

- questionnaire
- checklist
- diary kept by worker
- observation

Samples of forms you may find helpful follow: job observation recording sheet, job task analysis questionnaire, and job checklist.

Sample

**Job Observation Recording Sheet**

JOB TITLE:_____

WORK SITE LOCATION:_____

DATE:____ START TIME:_____ STOP TIME:____ TOTAL LAPSED TIME:_____

1. What product is created? How long does it take to produce from start to finish?

2. Describe work conditions:

3. What equipment, tools, reference and other materials are used to complete this job?

4. How frequently is the activity performed?

5. What reading skills are necessary for job performance?

6. What writing skills are necessary for job performance?

7. What math skills are necessary for job performance?

8. What oral communication skills are necessary for the job?

Employee comments?

Sample

## Job Task Analysis Questionnaire

**Please answer: On a scale from 1 to 5 with 5 being the most significant, how important are the following tasks when completing forms?**

| *Task list* | *Significance* *Least Significant.....Most Significant* | | | | |
|---|---|---|---|---|---|
| **A. Completing Forms** | | | | | |
| Submit listing contract with all blanks filled in | 1 | 2 | 3 | 4 | 5 |
| Submit profile sheet with all blanks filled in | 1 | 2 | 3 | 4 | 5 |
| Submit feature sheet with all blanks filled in | 1 | 2 | 3 | 4 | 5 |
| Obtain broker's signature on all forms | 1 | 2 | 3 | 4 | 5 |
| Download all information to MLS database | 1 | 2 | 3 | 4 | 5 |
| Submit forms to MLS | 1 | 2 | 3 | 4 | 5 |
| Download pertinent information on company database | 1 | 2 | 3 | 4 | 5 |
| Send thank-you letter to client | 1 | 2 | 3 | 4 | 5 |
| Send 100 postcards to farm area | 1 | 2 | 3 | 4 | 5 |
| Prepare 10 ads, classified and display | 1 | 2 | 3 | 4 | 5 |
| Order photos | 1 | 2 | 3 | 4 | 5 |
| Check out yard sign | 1 | 2 | 3 | 4 | 5 |

The following sample checklist could be used by a supervisor to complete a task analysis for an individual worker.

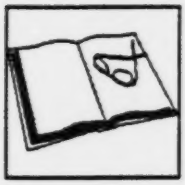
**Checklist**

**Worker's Name:**

**Department:**

**Position:**

| Date Completed | Competencies |
|---|---|
| _____ | **Introduces self and others** |
| _____ | **Uses common greetings** |
| _____ | **Writes name, address and social security numbers** |
| _____ | **Tells time in English** |
| _____ | **Reads a time clock** |
| _____ | **Confirms that instructions are understood** |
| _____ | **Asks for additional instructions** |
| _____ | **Reports problems orally** |
| _____ | **Reports/describes completed work** |
| _____ | **Reads procedures for fire and medical emergencies** |
| _____ | **Reads memos** |
| _____ | **Reads work schedules and pay checks** |
| _____ | **Requests overtime** |
| _____ | **Reads safety signs** |
| _____ | **Passes on a message orally** |
| _____ | **Fills out employee credit union forms** |
| _____ | **Describes work-related problems** |
| _____ | **Calculates amount of goods produced** |
| _____ | **Calculates percentage of rejects** |
| _____ | **Calls in sick** |



## Gathering Workplace Print Materials

In addition to talking with various personnel to obtain information for the basic skills task identification, the curriculum planner must also observe the physical work environment. Workers are often expected to read office memos, bulletin board announcements, and instruction manuals.

Curriculum planners should try to collect all materials written and read on the job to determine the degree of skill proficiency an employee must have to do the job well. It may be necessary to receive permission from the employee's supervisor or department manager to take documents from the work area. This request should be made in advance.

Written materials used on the job vary considerably, depending on the employee's duties and organization. For example, unskilled workers may consult written material no more demanding than warning signs, graphics on machines, or labels on boxes. In contrast, clerks in an insurance company or bank may access information on computer screens, review files, and consult procedure manuals. They may also need to write letters and carry out mathematical computations. Examples of all types of written materials involved in the job should be collected, if possible.

A resource list of all the documents can be found on the next page.

## Checklist of Workplace Printed Materials

Company Name_____

[ ] **catalog/brochures**

[ ] **charts/tables**

[ ] **diagrams**

**forms**

[ ] accident/injury
[ ] insurance
[ ] job bid
[ ] production
[ ] request for leave
[ ] scrap card
[ ] suggestion
[ ] supply request
[ ] W-2
[ ] other:_____

**graphs**

[ ] bar graph
[ ] histogram
[ ] line graph

[ ] **invoice**

[ ] **job aids**

[ ] **labels**

[ ] **manual, personnel**

[ ] **manual, procedures**

[ ] **maps, floor plans**

[ ] **meeting notes**

[ ] **memos**

[ ] **move tickets (pick tickets**

[ ] **newsletters**

[ ] **packing lists**

[ ] **pay stubs/paychecks**

[ ] **performance evaluation forms/reports**

[ ] **product specifications**

[ ] **purchase orders**

[ ] **reference materials**

[ ] **requisition forms**

**signs**

[ ] safety
[ ] location
[ ] other_____

**schedules**

[ ] work
[ ] production
[ ] other:_____

Excerpted from Linda Mrowicki, *Workplace Education Division of the Center: Resources for Education.*

## Case Study #2
## Preparing a Job Task Identification

Select a simple job task which you do regularly in your job or at home. Describe the task by providing the information asked for below. Provide as much detail as possible.

Task name:_____

Task description: (Describe the task in general, stating its purpose and desired results):

_____
_____
_____
_____.

List of print materials: (listed the printed resources you use to help you complete this task--for example, forms, reference manuals, books, notes, etc.)

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List of writing tasks (What are the writing tasks you do in order to complete this work--for example, forms to fill in, memos or notes):

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List of math tasks (list any math required to complete this task):

•

•

•

•

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•

List of communication skills: (list any oral skills in order to complete this task--for example, talking on the phone, answering questions, listening)

•

•

•

•

•

Suggested answers to this case study may be found in the appendix of this handbook.

## Writing a List of Basic Skills Competencies Needed for the Identified Tasks

Once you have gathered your information from the workplace, you will be able to compile a list of the basic skills competencies needed to perform the work. These competencies are then written in terms which relate to the specific needs of the workplace.

A basic skills competency is a brief statement written in behavioral terms which describes what is necessary to complete a task.

The following are examples of core *reading* competencies:

- read a sign
- read a label
- read a list
- read a "to do" list
- read a form
- read a paycheck
- read a memo
- read a checklist
- read a chart
- read a diagram
- read a pie chart

The following are examples of core *writing* competencies:

- fill out a simple form
- fill out a complex form
- fill in a schedule
- fill in a chart
- write a memo
- write minutes from a meeting
- take notes at a meeting
- write a list of instructions

The following are examples of core *math* competencies:

- calculate the size of an object
- calculate amount of pay and deductions
- calculate weight
- estimate number of parts scrapped
- calculate amount of time needed to complete a task
- calculate number of parts completed during a specific time period
- add, subtract, multiply, divide fractions
- count
- calculate percents
- measure inches
- measure with metric system
- convert to metric units

The following are examples of *English as a second language* oral competencies:

- describe production process
- follow instructions to carry out a simple task
- respond appropriately to supervisor's comments about the quality of work
- clearly state that something has been/not been understood
- report errors on a paycheck or piecework form
- report unsafe conditions to a supervisor
- communicate emergency situation
- initiate and respond to greetings and farewells

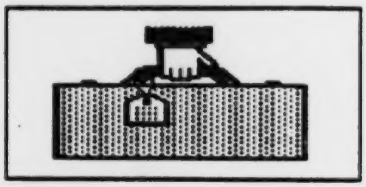
Here is an example of ten core competencies identified for production workers:

1. State job title and describe job duties.
2. Name departments and identify the materials used in each department.
3. Read and understand the company process flow chart.
4. Read operator basic list of instructions.
5. Give and follow simple oral directions to locate an object or a place.
6. Read a job card.
7. Give appropriate reasons for absence, in person or on the phone.
8. Give apologies appropriately when a situation calls for it.
9. Clarify/verify spoken speech.
10. Read and understand department memos.

Adapted from *A Core Curriculum for the Manufacturing Industry in Chicago and Northern Illinois, Workplace Education Division of the Center--Resources for Education* in *Workforce Literacy Task Analysis and Curriculum Adaptation Workshop*, West Palm Beach, May 17-19, 1993.

Once the draft of the list of competencies is completed, it should be shared with appropriate people for their input and approval.

## Case Study #3
## Determining Core Competencies for Job Situations



Imagine that you work for a medium-size manufacturing plant. The company produces paper products.

What might be core competencies in reading that workers must be able to perform in the event of a fire on the premises?

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Imagine that you are an order-taker and cashier at a fast-food restaurant. What are some mathematics competencies that you might need to complete an order?

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Suggested answers to this case study may be found at the end of this handbook.

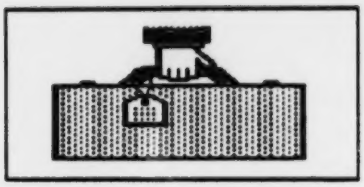
# Sample Basic Skills Task Identification

Once you have identified or obtained a listing of the tasks to be done in a specific job, you can then go on to identify the job-specific basic skills needed. Here is how a sample basic skills task identification might look:

Job position: Real estate agent
Task: Calculating mortgage interest

| Job Sub-tasks | Basic Skills Competencies Needed |
|---|---|
| 1. Answer the telephone<br><br>Scenario:<br>Real estate agent and customer are discussing the details of purchasing a home over the phone. The customer asks, "What will my monthly mortgage payment--principal and interest only--be if I make a $25,000 down payment and take a fixed-rate loan for $100,000 amortized at 7% for 15 years?" | 1.1 Recognize work-related vocabulary:<br>principal<br>interest<br>amortized<br>fixed-rate mortgage<br><br>1.2 Formulate questions:<br>What is the nature of the request?<br>Do I have enough information to complete the task? (yes)<br>Do I have too much information to complete the task (yes--do not need down payment amount)<br>What amount do I need to write down? (loan amount, interest rate, term) |
| 2. Write down information: $100,000 loan, 7%, 15 years | 2.1 Determine and write:<br>loan amount (100,000)<br>interest rate (7%)<br>term (15 years) |
| 3. Turn on calculator and find appropriate function keys to run an amortization program | 3.1 Read appropriate function keys and program. |
| 4. Input appropriate information:<br>$100,000 PV<br>7 I<br>15 x 12 N<br>Solve for PMT | 4.1 Input appropriate numbers with corresponding function keys<br>4.2 Imput monthly factors (15 years x 12 months)<br>4.3 Read calculator response and write down. |
| 5. Respond to customer: "The monthly payment on that loan would be $898.83 principal and interest." | 5.1 Summarize and repeat information to caller. |

# Case Study #4
# Creating a Basic Skills Task Analysis



Create a basic skills task analysis for a job with which you are familiar. You may not need to use all the spaces provided.

Job position:
Task:

| Job Sub-tasks | Basic Skills Needed |
|---|---|
| | 1.1 |
| 1. | 1.2 |
| | 2.1 |
| | 2.2 |
| 2. | 2.3 |
| | 3.1 |
| | 3.2 |
| 3. | 3.3 |
| | 4.1 |
| | 4.2 |
| 4. | 4.3 |
| | 5.1 |
| | 5.2 |
| | 5.3 |
| 5. | |

Suggested answers to case study questions may be found at the end of this handbook.

## Using the Videotape

You now have some information on how to conduct a basic skills task analysis. You are ready to view the videotape.

Pretend you are a member of an interview team. Write down anything you see or hear that indicates a need for reading, writing, or math skills. If you notice written materials that could be used in lessons for equipment operators at the Sandestin Golf Resort, make a note of them.

Compare your list to the one after this exercise.

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## Basic Skill Competencies for Equipment Operators

*Reading Skills*

Be able to read:

1. materials safety data sheets
2. signs
3. labels on machines
4. daily task on blackboard
5. manuals
6. time clock/cards
7. application
8. pay check
9. signs for chemical disposal
10. memos
11. *Sandestin Newsletter*
12. gauges and odometers on equipment
13. "to-do" list
14. computer screens
15. computer/calculator keyboards

*Writing Skills*

Be able to:

1. fill out application
2. fill out time sheet
3. write signs
4. order parts

*Math Skills*

Be able to:

1. convert fractions to decimals for gauging
2. calculate the number of hours worked

Now describe the basic skills/job task of an equipment operator. Provide as much detail as possible.

Task name: _____

Task description:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Now compare your answers with the answers on the following page.

Task name: job equipment operator

Task description: (Describe the task in general, stating its purpose and desired results):

1. reads bulletin board and chalkboard for job assignments
2. uses handtools (shovels, rakes, bushax, swing blade, etc.)
3. rakes sand traps.
4. changes cups, tee markers, etc.
5. empties trash receptacles and picks up trash.
6. operates variety of equipment, such as tee mower, 72 inch mower, 84 inch mower, and blitzer.
7. follows safety procedures regarding handling of chemicals
   operates all transportation vehicles.
8. follows procedures regarding time cards and other paperwork.
9. applies fertilizer and seed.
10. follows preventative maintenance procedures.
11. performs other tasks as necessary or as assigned.
12. cooperates at all times with fellow employees, management, residents and guests.

Using the job task description of the equipment operator, now create a basic skills needs analysis for that job. You may not need to use all the spaces provided.

Job position:
Task:

| Job Sub-tasks | Basic Skills Needed |
|---|---|
| 1. | 1.1 |
| | 1.2 |
| | 1.3 |
| 2. | 2.1 |
| | 2.2 |
| | 2.3 |
| 3. | 3.1 |
| | 3.2 |
| | 3.3 |
| 4. | 4.1 |
| | 4.2 |
| | 4.3 |
| 5. | 5.1 |
| | 5.2 |
| | 5.3 |

**Compare your answers with the information provided on the following page.**

Job position: job equipment operator

| Job Sub-tasks | Basic Skills Needed | |
|---|---|---|
| 1. Operates equipment | 1.1 | read operator's manual |
| | 1.2 | read different types of warning labels. |
| 4. Changes cups, tees markers, etc. | 4.1 | recognize letters and numbers on the equipment |
| | 6.1 | read product labels |
| 6. Cleans restrooms | 6.2 | read and follow directions |
| | 6.3 | read OSHA materials and material data safety sheets |
| 12. Applies fertilizer and seeds | 12.1 | read alphanumeric notations |
| | 12.2 | read the abbreviations for quantities (numbers) |
| 14. Cleans the lunchroom, etc | 14.1 | read product labels |
| | 14.2 | read and follow directions |
| | 14.3 | read and follow rules of safety |

## Completing the Basic Skills Needs Analysis

Once the material from the basic skills task analysis has been gathered--whether by observation, interview, checklist or questionnaire--the information should be organized and reviewed.

It is advisable to organize the information into a report that can be easily reviewed by all those who are involved in the planning and managing of the basic skills program.

The next step is to assess the current skill level of the workplace. This is usually accomplished through a customized test or a standardized test, such as the *Test of Adult Basic English* (TABE). Some of the advantages and disadvantages of customized versus standardized assessments are discussed below:

| Standardized Assessments | Customized Assessments |
|---|---|
| Proven to be valid and reliable | Reflects the skills needed by the job |
| Proven to be nondiscriminatory | Requires development time |
| Readily available | Would have to be proven to be valid, reliable, and nondiscriminatory |
| Results can be compared to other programs | |
| Scores may be correlated with available instructional material | |
| Testers may need training | |
| Possibility that the test does not reflect skills needed for the jobs | |

The development of a customized assessment should be a process which involves the business partner and the educational provider through all phases of the development. The following is one example of the steps in such a process:

1. Determine what you want to assess.

2. Obtain company input/approval. *Is this what the company wants to measure?"*

3. Write performance objectives.

4. Draft sample test items.

5. Obtain company input/approval. *Is the test going to measure what the company wants? Is the format of the test items appropriate for the workforce?*

6. Draft the assessment.

7. Field-test the assessment within your agency. *Are the items clear? Do the items measure basic skills rather than job content?*

8. Revise the assessment.

9. Obtain company input/approval. *Is the content accurate? Are the directions clear? Does the assessment appear to be too long or too short?*

10. Revise the assessment as appropriate.

11. Field-test the assessment with a sample of workers. *Is the assessment too long? Too short? Are there any ambiguous items?*

12. Share the results with the company and prepare the final version of the assessment.

There are a number of methods you can use to report assessment results.

1. You can provide a general breakdown of all participants:

| Person | Score |
|---|---|
| A | 19 |
| B | 20 |
| C | 20 |
| D | 19 |
| E | 14 |

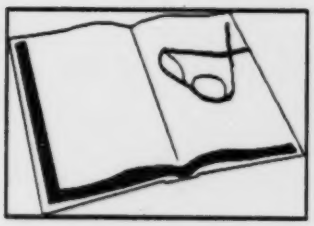
2. You can provide statistical information such as the range, mean, mode, and standard deviation.

3. You can provide bar, pie, or line charts showing which percent of participants fell into which categories.

No matter which reporting method you choose, *never give an employer a specific individual's test scores.* Assessment results could be used inappropriately by supervisors or employers for hiring, retention, or firing practices.

After the workforce is assessed, program planners can determine the extent of the gap between the desired level of basic skills as indicated by the basic skills assessment report and the workplace assessment results.

Once the feedback has been received, the curriculum developer reviews all the material to determine which competencies should be included in a course. These competencies are written in terms which relate to the specific needs of the workplace.



**Developing**
**Workplace Curriculum**

## The Art of Teaching Adults

Malcolm Knowles, an expert on adult education, has written a great deal about the designing of successful instruction for teaching adults. He contends that teaching adults is very different from teaching children. He coined the term *andragogy*, which means the art of teaching adults. The major assumptions of andragogy are that:

The adult has

- a self-concept of independence rather than dependence
- a vast reservoir of experience which is a resource for learning
- a time perspective of immediate application
- a problem-centered rather than subject-centered learning orientation

Furthermore:

- adult learners desire active participant involvement in planning and learning
- adult learners desire an opportunity to relate new learning to past and present experience
- teachers must provide careful needs assessment to insure that learning is pertinent and problem-centered

Malcolm Knowles' ideas provide strong support for the concept and practice of workforce education. How does workforce education put these assumptions into practice?

Why might adults be motivated to learn in ways that are different from children?

How might the adult's experiences influence the classroom environment?

How might learners' experience be used to enrich workforce education classes?

What learning strategies that children enjoy might also be successful with adults?

Suggested answers to the previous exercises can be found on the following pages.

*How might adults be motivated to learn in ways that are different from children?*

- adults are more problem-centered rather than subject-centered
- adults are more intrinsically motivated rather than extrinsically motivated
- self-assessment and mutual assessment by teacher and student are more important to adults than to children
- with children, evaluation is done by a teacher on a normed basis; for adults, the preferred method is peer evaluation and tends to be based on criterion-referenced evaluation
- adults prefer a relaxed, trusting, mutually respectful climate that is collaborative and supportive. So do children, but they often wind up with a formal authority-oriented climate.
- adults learn from their peers and prefer less traditional authoritarian teachers
- adults prefer independent study and inquiry projects over assigned readings and lectures

**(Other answers are possible.)**

*How might learners' experience be used to enrich workforce education classes?*

- the adult student's life is rich with experience and can be a powerful resource for the teacher
- in many cases, the adult students are more experienced than the teacher and can provide a challenge to the teacher (in this case, the student should be given an opportunity to invest in the success of the classroom by being given some additional responsibilities, if possible)
- the adult student's previous experience in a classroom may be poor and provide a challenge to the teacher in terms of overcoming barriers

**(Other answers are possible.)**

*What different physical needs would an adult learner have compared to a child?*

- older students might need more comforts: for example, bigger chairs or desks
- older students might need more light
- older students might be more sensitive to the acoustical environment because of hearing problems
- older students might have more needs in terms of the temperature of the room
- older students might need easier access to the building, to the classroom, to the bathrooms and cafeteria areas

**(Other answers are possible.)**

*What similar learning strategies that children enjoy might also be successful with adults?*

- using learning centers that stress discovery and inquiry
- short lectures, lots of discussion
- participative, interactive classroom activities
- colorful visuals
- independent projects

**(Other answers are possible.)**

## Developing a Curriculum Design

Now that the job competencies and basic skills have been identified, it is time to organize this information into a curriculum--a series of lessons customized to meet the needs of the employer and the workers.

In order for the curriculum to be successful, the content, the materials, the methods and sequencing must be related to the specific job setting. The basic skills needs analysis will help the curriculum designer with accomplishing this goal: the employees' basic skills needs will form the basis for the course content, approach, and customized materials. (Most workplace education curriculum planners advise using commercially prepared materials sparingly. While they can be used effectively with learners who are at the most basic levels, they will *always* need to be supplemented with job-specific materials.)

The three steps for developing a customized curriculum are:

**#1. Using the basic skills task identification, write customized competencies.**

The curriculum planner reviews the results of the basic skills task identification to determine which competencies should be included in a course. These competencies are written in terms which relate to the specific needs of the workplace.

**#2. Obtain approval for the list of competencies.**

The draft of the list of the competencies is shared with appropriate people for their input and approval. Some or all of the following people may be involved with the review process: the company contact person, managers, supervisor, union leaders, and workers.

**#3. Write a course plan or syllabus which includes competencies, basic skills, company-specific terms, activities and resources.**

The course plan or syllabus identifies the basic skills which are needed to perform that competency. These competencies are in the areas of reading, writing, math or oral language. Then company-specific terms, materials or situations are identified. The syllabus also contains a list of possible learning activities which are appropriate to the lesson.

In addition to considering content and materials, the curriculum planner must also consider a number of other issues: for example, teaching methods, sequencing, time for delivery of instruction, climate-setting activities, budget, and media.

See the following for a suggested outline of a curriculum design.

**Outline of a Curriculum Design**

Description of need for instruction and needs assessment, if any

Description of proposed target audience

Estimated time for delivery of instruction

Instructional goal and major competencies that learner needs to be able to demonstrate

Description of entry behaviors and characteristics

Climate-setting activities

Description of final assessment, including sample test items if appropriate

Lesson plans, including time frames, content, process, and needed materials

Evaluation plan for learner and facilitator

Marketing plan

(Note that the need for instruction and needs assessment listed in the suggested curriculum design has already been determined by the basic skills needs analysis.)

For information about preparing the various elements of a curriculum design described above, read the following pages.

## Writing an Instructional Goal

The instructional goal referred to in the preceding outline grows out of the basic skills needs analysis. An instructional goal establishes rather broad indications of the problem that must be solved; then specific statements will emerge and focus on what learners will be able to do when they complete their instruction.

A good instructional goal

- contains clear, general statement of learner outcomes
- describes what the learner will achieve
- is related to an identified problem and needs assessment
- can be achieved through instruction
- can be accomplished in a reasonable period of time.

Here is an example of an instructional goal:

*By the end of a 30 hour program, workers will be able to fill out documents related to personnel matters accurately.*

Here is another:

*By the end of a 15 hour program, workers will be able to use appropriate social verbal and written language.*

Here is another:

*By the end of a 5 hour program, workers will be able to calculate accurately all figures on a sales order form.*

Here are some additional suggestions for creating an instructional goal:

1. Write it on paper.

2. Brainstorm to identify behaviors workers would demonstrate to reflect their achievement of the goal.

3. Select the behaviors that best represent the goal.

4. Select indicators of behaviors.

5. Incorporate behaviors into a statement that describes what the workers will do.

6. Evaluate the statement for clarity.

Develop an instructional goal that would involve competencies for workers in a book store.

•

Try another version:

•

Develop an instructional goal that would involve competencies for workers in a shoe factory.

•

Try again:

•

See next page for suggested responses.

Develop an instructional goal that would involve competencies for workers in a book store:

*By the end of a 10 hour program, book store employees will be able to categorize textbooks based on subject matter.*

Develop an instructional goal that would involve competencies for workers in a shoe factory.

*By the end of a 5 hour program, workers will be able to calculate accurately the amount of shoe leather needed to create shoe model 519 in sizes ranging from 8 to 13.*

Now that the instructional goal has been written, it must be broken down into its sub-goals. For example:

Instructional goal: By the end of a 3 hour program, the participant will be able to identify and discuss the major tax strategies that home sellers, buyers, and real estate practitioners can use to avoid and/or defer taxes.

By the end of the three hour program, the student will be able to

I. identify the major deductions recognized by the IRS for primary homeowners
   - A. contrast the terms *acquisition loan* versus *equity loan*
   - B. list the different deduction limits on interest

II. describe the rules for reporting gain on the sale of a primary residence
   - A. calculate the gain by filling out a worksheet
     1. recognize the term *adjusted sales price*
     2. define the term *fix-up expenses*
     3. state the use of commission in computing the adjusted sales price
   - B. state the rules regarding reporting loss on the sale of a primary residence
   - C. calculate tax consequences if rollover rule is not met

III. apply tax strategies for deferral of tax on gain on IRS form 2119/3903
   - A. calculate tax due if using the once-in-a lifetime exemption is used
   - B. calculate tax due if using the rollover rule
   - C. define the rules regarding movie expenses as a tax deduction

Notice in the example on the previous page that core competencies involving reading, writing, and math skills, among others, are now identified and organized into a logical sequence.

Using one of the instructional goals that you have written in the previous exercise, now try to analyze it into its various components.

- Instructional goal:
  - 
  - 
  - 
  - 
  - 
  - 
  - 
  - 
  - 

For possible answers to this exercise, see the appendix to this handbook.

## Entry Behaviors of Learners

Just as important as the instructional goal is the consideration of the target audience of the instruction. What are their entry behaviors?

Entry behaviors can be defined as *the knowledge, skills, and abilities that learners bring to the instructional situation.*

As early as possible, the curriculum planner should determine the learners':

- *educational level*: past academic achievement, reading level
- *age or age range*
- *prior knowledge of the subject*
- *previous experience*
- *native language*

To determine adults' entry behaviors, ask:

1. What are their reasons for learning?
2. What are their life experiences?
3. What are their immediate goals?
4. Are they self-directed?
5. What are their unique physical requirements?
6. What are their values, opinions, and behaviors?
7. Are they motivated? Anxious?
8. What are their learning styles?

Students/workers have different perceptual learning styles. These learning styles have been characterized as:

1. print
2. aural
3. interactive (group discussion)
4. visual
5. haptic (hands-on)
6. kinesthetic
7. olfactory

Research indicates that learning styles change over time, particularly as students mature. Students age 20 to 49 tend to prefer visual, haptic, interactive and aural learning--in that order, whereas students age 50 and over prefer visual, interactive, aural and haptic learning experiences--in that order.

Information about entry behaviors can be easily obtained by observation or a student-completed checklist when the worker begins the class, but it is helpful to have this information before any further planning is done so that lessons can be tailored around a student's special needs.

In designing learning experiences, it is important to be aware of learners' preferences and to include a range of experiences which address a variety of learning styles. All learners are better able to retain materials presented in a variety of ways.

How might you accommodate a group of adults who are more visually oriented? What instructional methods would you employ?

How might you accommodate a group of adults who are more haptic in orientation? What instructional methods would you employ?

How might you accommodate a group of adults who are more aural in orientation? What instructional methods would you employ?

How might you accommodate a group of adults who are more interactive in orientation? What instructional methods would you employ?

Some suggested answers to these questions can be found on the following pages.

*How might you accommodate a group of adults who are more visually oriented? What instructional methods would you employ?*

- use overheads
- use videotape and film programs
- use the blackboard
- use charts and diagrams
- rely less heavily on lecture
- have posters around the classroom

**(Other answers are possible.)**

*How might you accommodate a group of adults who are more haptic in orientation? What instructional methods would you employ?*

- use worksheets and other pen and pencil exercises
- have students write on the blackboard
- have students use manipulatives where possible, such as taking things apart and reassembling them
- use computers, if possible
- rely less heavily on lecture and talk-oriented teaching strategies

**(Other answers are possible.)**

*How might you accommodate a group of adults who are more aural in orientation? What instructional methods would you employ?*

- rely more heavily on lecture
- use audio-programs in class
- use audiocassettes for learning outside of class
- use other audio technology, such as records and CDs
- use lecture and interactive teaching strategies more often than print-reliant or visual strategies

**(Other answers are possible.)**

*How might you accommodate a group of adults who are more interactive in orientation? What instructional methods would you employ?*

- use participatory exercises when possible
- give frequent opportunities for students to move around and talk more
- use small group activities when possible
- rely less heavily on teacher-dominated activities
- allow for frequent discussions

**(Other answers are possible.)**

## Types of Learning Activities

In addition to considering the entry behaviors of students/workers, the curriculum planner will also have to design appropriate learning activities. From the previous discussion, planners can easily understand the need to vary instructional technique, not only for variety's sake, but also to meet the different learning needs of students.

The chart on the following pages lists some learning activities that are particularly useful in the acquisition of basic skills.

## LEARNING ACTIVITIES

Activity — Skill Area

| | Listening | Speaking | Reading | Writing | Math |
|---|---|---|---|---|---|
| Cloze Passages | | | x | x | |
| Controlled Composition | | | | x | |
| Dialog Journals | | | | x | |
| Dictation | | | | x | |
| ESL Drills | x | x | | | |
| Free Writing | | | | x | |
| Guided Discussion | x | x | | | |
| Information Gap | x | x | x | x | |
| Information Gathering | x | x | x | | |
| Language Experience | | | x | | |
| Math Skill Assessment | | | | | x |
| Multiplication/Division | | | | | x |
| Paragraph Reconstruction | | | x | x | |
| Reading Passage with Comprehension Exercise | | | x | x | |
| Role-Plays | x | x | | | |
| Sight Word Reading | | | x | | |
| Task Performance | x | | x | | |
| Technical Reading Technique | | | x | | |
| Total Physical Response | x | | | | |
| Written Math Word Problems | | | x | | x |

## CLASSROOM ACTIVITIES

**Cloze Passages**

A. Instructor identifies or prepares a passage of 150-250 words.
B. Instructor leaves the first sentence of the passage intact.
C. Instructor deletes every 5th or 7th word.
D. Instructor encourages learners to infer meaning from the text even if they cannot read each word. (Alternative: Instructor can omit key words instead of every 5th or 7th word)

**Controlled Composition**

A. Instructor provides model passage.
B. Learners modify the passage according to the instructor, such as, changing the passage from the present tense to the past tense.
C. Instructor corrects as needed.
D. Learners write compositions of their own using the same patterns but creating their own content.

**Dialogue Journals**

A. Each learner is given a spiral notebook.
B. Instructor asks learners to write for ten minutes each class session on a subject of their choice.
C. Instructor responds in writing to the content of learners' writing and begins a written dialogue with learner.
D. Instructor does not grade or correct any errors! Whenever possible, the instructor models correct language in his/her response to the learner.

**Dictation**

A. Instructor reads a passage at normal speed as learners listen.
B. Instructor reads passage again with pauses and students write.
C. Instructor rereads at normal speed so learners can check their work.
D. Instructor checks learners' work.

**E.S.L. Drills**

**A. Substitution Drill**

1. Instructor provides the model.
2. Learners repeat.
3. Instructor repeats the sentence and adds a word(s) to include in the sentence.
4. Learners substitute the target word(s) in the sentence and make any other changes as necessary.
5. Instructor continues with new words.

B. **Chain Drills**

1. Instructor begins by asking a question to one learner.
2. Learner responds to the question.
3. Same learner asks the question to another learner.
4. Instructor repeat process until all learners have responded.

**Free-Writing**

A. Instructor asks learners to write freely on any topic for 5 or 10 minutes.
B. Instructor does not correct writing, he/she reads learners' work and comments on the ideas the learner expressed.
C. Learners volunteer to read compositions aloud to class.

**Guided Discussion**

A. Instructor introduces a workplace topic.
B. Instructor facilitates discussion by asking open-ended questions about the topic.
C. Instructor encourages reticent learners to participate while not allowing more talkative learners to dominate discussion.

**Informal Math Skill Assessment** (Addition, subtraction, multiplication, division)

A. Explain purpose of skills.
B. Assess learner's levels of skills by asking learners' how much they feel they know.
C. Write sample computation problems on board.
D. Check individual student's work.
E. Determine students' needs.

**Information Gap**

A. Instructor obtains written workplace materials.
B. Instructor prepares two copies. On each copy the instructor omits key information.
C. Instructor divides learners into pairs and gives each learner one copy.
D. Learners ask each other for the missing information and fill in the missing information gaps on their copies.

**Information Gathering at Worksite**

A. Instructor introduces a workplace topic.
B. Instructor elicits information from learners about the topic at the worksite.
C. Instructor writes the information on a flipchart.
D. Instructor transcribes the information from the flipchart onto worksheets.
F. Instructor distributes worksheets at the next session.
G. Learners read the worksheets silently and then aloud.
(Instructor may prepare written comprehension exercises.)

**Language Experience**

A. Instructor asks a learner to tell a story, relate an incident, or describe what he/she does on the job each day.
B. Instructor writes down exactly what the learner has said.
C. Instructor gives the learner the written passage of his/her exact words.
D. Learner reads the written passage silently.
E. Learner reads the written passage aloud. The learner can make any changes he/she wishes at this time.
F. Instructor provides correction as needed to oral reading.

**Multiplication/Division Skill Drill**

A. Explain multiplication/division table.
B. Explain key features.
C. Demonstrate use of table with students.
D. Learners practice using the table with computation problems.

**Paragraph/Reconstruction**

A. Instructor selects a paragraph.
B. Instructor lists the sentences from the paragraph in random order. The instructor omits the topic sentence.
C. Learners sequence the scrambled sentences into a paragraph.
D. Learners develop an appropriate topic sentence.

**Reading Passage With Comprehension Exercises**

A. Instructor asks learners background questions tied to the passage.
B. Instructor asks descriptive questions about photos or drawings connected with the passage.
C. Instructor asks predicting questions about the content of the passage.
D. Learners read the passage silently.
E. Instructor asks general comprehension questions orally.
F. Learners read passage silently.
G. Instructor asks specific comprehension questions orally.
H. Learners complete written comprehension exercises such as True/False, Fill-in-the-Blank, or Question/Answer.

**Role-Plays**

A. Instructor sets the scene and the purpose of the role-play.
B. Instructor introduces useful expressions and provides background information.
C. Instructor assigns learners roles in which they must improvise behavior and language.
D. Learners practice role-plays within group.
E. Learners perform role-plays for the rest of the class.

**Sight Word Reading**

A. Instructor shows flashcards of the key words.
B. Instructor reads the words aloud.
C. Learners look at the written words and read them aloud.
D. Instructor repeats the process as many times as necessary.
E. Instructor displays the flashcards out of sequence.
F. Learners read the words aloud.

**Technical Reading Technique** (Katherine Schlick Noe)

A. Reflect Instructor asks learners to share what they already know about the topic.
B. Predict Learners predict what the passage will be about based on the title.
C. Skimmer's Prediction - learners skim and refine their predictions
D. Purpose setting - learners identify what they are supposed to get out of the topic.
E. Action planning - learners share what they are supposed to do with document.
F. Learners read the text silently.
G. Instructor asks students how they will use the document.

**Total Physical Response.**

A. Instructor performs an action while saying the instructions orally.
B. Instructor says the instructions; learners listen and perform.
C. Instructor says the instruction; learners repeat and perform.
D. Learners tell other learners to perform actions.

**Vocabulary Development**

A. Instructor lists new words from a reading passage on the blackboard.
B. Learners skim a passage and identify other new words which the instructor writes on the board.
C. Learners provide definitions of the words they know. Instructor provides definitions for other words.
D. Instructor writes questions using the new words from the blackboard.

**Written Math Word Problems**

A. Describe a math situation.
B. Ask learners to "guesstimate" the answer.
C. Discuss the process and logic of the answer to the problem.
D. Compute the answer with the class.
E. Do 2-3 problems with the learner's and check work.
F. Give learners individual worksheets and check their work.



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**Written Task**

A. Instructor introduces a written set of instructions.
B. Instructor and learners read and perform the instruction.
C. Learners individually complete the task.
D. Instructor provides correct answers while learners check their work.
E. Instructor reviews and re-teaches as necessary.

From *Customized Curriculum*, Workplace Education Division of the Center–Resources for Education, Des Plaines, Illinois, 1990.

Listed below are a number of instructional strategies for you to consider in your curriculum design. These strategies are described, including a brief discussion of the advantages and disadvantages of each, so that you may consider how they may be used appropriately in the classroom.

- Mini-Lecture: information-driven delivery of material by teacher; usually prepared beforehand

  *Advantages: efficient delivery of material*

  *Disadvantages: allows for little or no student participation; appeals to the aural student but not to the print or visually oriented; does not appeal to the interactive, haptic, kinesthetic, or sensory learner, either. Lecturer may have poor presentation skills.*

- Interview: similar to a dialogue, but not a conversation. More structured than an interview. One person will ask questions; the other will respond.

  *Advantages: students receive another opinion on the subject; highly aural teaching strategy*

  *Disadvantages: not appealing to print or sensory learners (except for aural). The other expert may have poor presentation skills and may decide not to show up. Financial resources may also be necessary to hire the expert. Interview questions must be structured in advance and may have to be pre-approved by the subject or by management.*

- Demonstration: an explanation by example or experiment.

  *Advantages: engages the visual and interactive student. Appeals to students who are problem-centered.*

  *Disadvantages: may be expensive to get materials. Demonstration might not go as planned.*

*Action Strategies*

• In-Basket Activities: students are given a series of quick-paced problems to solve as though they appeared in their office's "in" basket

*Advantages: fast-paced, highly interactive strategy. Appeals to students who like to think "on their feet." May involve some haptic learners, too.*

*Disadvantages: may be too fast if a timed activity. Requires student involvement and direction and may not work in some settings where students want high teacher involvement. Requires a great deal of set-up time.*

• Simulations: an exercise where students have an opportunity to experience a real-life situation without any risk to life or limb

*Advantages: high involvement for interactive and haptic students. Gives students a chance to experience the "real thing."*

*Disadvantages: may be expensive (e.g., flight simulation) or frightening to bring to the classroom.*

• Role Playing/Skits: an exercise where students act out parts to demonstrate a particular concept. Usually structured by the teacher at the start.

*Advantages: high involvement for interactive students. Gives students practical insight into solving problems.*

*Disadvantages: teacher has little control over what students may say or do. Students may be ill-equipped to provide ad-lib responses to situations.*

• Case Studies: use of real-life experiences usually in written format

*Advantages: print-oriented students have the advantage. Gives students an opportunity to "learn from other's mistakes" in real life stories.*

*Disadvantages: if not well-written, case studies can be boring at best and provide little insight at worst. Usually requires research on the part of the teacher. May involve some cost and copyright concerns. Students who are not print-oriented may not enjoy this exercise.*

• Field Trips: a trip away from the classroom to permit the gathering of data first hand

*Advantages: students can observe and real-life material and make direct application.*

*Disadvantages: transportation and financial barriers.*

• Direct Experiences: students go into the field and participate in real-life situations.

*Advantages: students can make direct application of theory to practice.*

*Disadvantages: can be expensive and possibly dangerous.*

*Interaction/Participation Strategies*

• Discussion: talking (or writing) in a deliberative fashion where diverse opinions are expressed

*Advantages: engages the interactive learner; allows adult students to share experiences and enjoy diverse opinions*

*Disadvantages: a student or teacher may monopolize the discussion; teacher may lose control of the classroom or the discussion itself; some students do not want to learn from anyone except the teacher-expert; some students do not understand the social restraints of discussion*

• Brainstorming: the unrestrained offering of ideas or suggestions by all members of a group

*Advantages: engages the interactive learner; allows adult students to share experiences and enjoy diverse opinions.*

*Disadvantages: even unconventional ideas may be expressed without restraint and thus may cause the teacher to lose control of the classroom or the discussion.*

• Total Physical Response: the instructor performs an action while giving the instructions verbally and then asks the learners to repeat and perform

*Advantages: engages the interactive learner by using actions to teach language; especially good for kinesthetic learners.*

*Disadvantages:* while extremely helpful for oral language acquisition, other applications are somewhat limited.

• Language Experience Activity: instructor asks learners to tell a story about what they do on the job each day and then the instructor writes down what the learners have said.

*Advantages: actively involves learners; insures relevance of content and language; appeals to a variety of learning styles.*

*Disadvantages: must be used with care for students with very low levels of English proficiency.*

## Considerations in Writing the Lesson Plan

Once the curriculum planner has taken into account the entry behaviors of students/workers and presentation strategies, it is time to write individual lesson plans for each competency. Planners also have to consider presentation or instructional strategies.

Every lesson plan should take into consideration the following elements:

- Competency to be mastered
- Time allowed and time of day
- Climate-setting activities
- Number and type of students/workers involved
- Materials needed
- Physical facilities and financial resources
- Instructional strategies
- Sequencing of lessons
- Instructor preference or expertise
- Evaluation of lesson

Each item in the lesson plan raises issues for consideration for the curriculum planner:

*Competency to be mastered*:

What type of competency is it? reading? writing? computation? Does the competency involve the cognitive domain (thinking)? the affective domain (feeling)? the psychomotor domain (performance)?

*Time allowed and time of day*:

How much time should be devoted to this lesson? How much time do I have? What time of day will the presentation be and how will that affect the energy level of the participants?

*Climate-setting activities*:

How should I introduce the subject? How can I motivate my students to learn this material? How can I make this lesson entertaining and informative? How can I get the participants to work together on this material, if applicable?

*Number and type of students/workers involved*:

Will the number of students be small or large? How will that affect the presentation strategies I want to use? What are the participants' entry behaviors? What are their learning styles?

*Materials needed*:

Do I have company material to use for this lesson? Do I need to generate my own material? Is commercial material available? Is it relevant? Is it expensive?

*Physical facilities and financial resources*:

> What kind of room will we be in? What seating arrangements are there? Are the chairs fixed or is the seating flexible? How are the lighting and the acoustics? Is the room air-conditioned? Is there a thermostat to control the temperature? Do I have the budget available to acquire materials, if necessary?

*Instructional strategies*:

> What instructional strategy (lecture, forum or panel discussion, for example) would be appropriate to teach this lesson? Would a variety of strategies be appropriate?

*Sequencing of lessons*:

> How does this lesson fit into the curriculum? How does it relate to the lesson before and after this one? What is the logic of placing this lesson where it is?

*Instructor preference or expertise*:

> Should I teach this lesson? Is there someone else who could teach this material in an effective manner--perhaps a company official? Can the students teach each other?

*Evaluation of lesson*:

> How will I know if the student can now perform this competency? How will I evaluate this lesson?

Review the lesson plan on the following page. The workers in this lesson plan are registrars at an insurance school for adult students. On occasion, these registrars sell calculators, books, and other school materials to students. They must be able to calculate sales tax on a hand-held calculator and fill out receipts for the student and for the school.

## Sample Lesson Plan

- Competency to be mastered:

  **Calculate Florida sales tax.**

- Time allowed and time of day

  **1 hour. After lunch. (1:30-2:30 pm.)**

- Climate-setting activities

  **Ask class: What is a tax? What do we pay tax on besides the sale of products?**

- Number and type of students/workers involved

  **5 students. All speak English as a second language. 50% have high school education or equivalent. The other half did not complete high school. All are women.**

- Materials needed

  **Calculators, pencil, paper, sales receipt forms.**

- Physical facilities and financial resources

  **3 square tables seating 4 each. Comfortable room.**

- Presentation strategies

  **After climate-setting activity, teacher will demonstrate several sales tax calculations on the blackboard.**

  **Students will then be given worksheets with 10 problems and work on them cooperatively.**

  **Finally, students will use actual sales receipt forms and role play purchasing items and paying tax.**

- Sequencing of lessons

  **In the previous lesson, students learned to convert percentages to decimals. In the next lesson, students will learn to calculate accurate postage on parcels.**

- Instructor preference or expertise

  **Students may assist each other on the worksheet but teacher will lead the discussion.**

- Evaluation of lesson

  **Students will turn in completed sales receipt forms.**

Multiple sessions for the same group on a regular basis would use a shorter format for the lesson plan. A sample form, such as the following one, could be used.

**Lesson Plan**

Competency: _____

**Learning Activities:**

**For presentation:**

_____
_____
_____
_____

**For practice:**

_____
_____
_____
_____
_____

**For application:**

_____
_____
_____
_____
_____

**Process for evaluation learning:**

_____
_____
_____

# Creating Customized Curriculum Materials

As Malcolm Knowles suggests, adult students prefer working on problems that have direct application to their lives. That is why it is best to take materials from their workplace--such as payroll sheets and insurance forms--and help them develop skills in dealing with those concerns.

Printed worksheets should be easy to read, not only in terms of visual content but also in terms of vocabulary. Print should be typed in at least 10 point font (this paragraph is in 12 point font), and vocabulary should be geared to the participants' level. If possible, 3-hole-punch all handouts so that students can store them easily in a notebook.

Worksheets should not be cluttered or deal with more than one lesson at a time.

On the following pages are examples of worksheets based on the table of contents of a company policy manual and on a parts ordering guide.

**Lesson: Reading the Company Policy Manual**

**What do the following terms mean?**

Table of Contents

Parent Company

Complaint Procedure

Credit Union

Disciplinary Action

Grooming Standards

**On what page can you find information about:**

holidays _____

insurance _____

smoking _____

uniforms _____

## How to Order Repair Parts

To eliminate error and speed delivery:

1. Write your name and address on your order plainly.
2. Explain where and how to make shipment.
3. Give product number, name and serial number that is stamped on the nameplate or serial plate of your product.
4. Order by quantity desired, the part number and the description of the part.
5. Send your order to us or visit your neared authorized distributor.
6. Inspect all shipments on receipt. If any parts are damaged or missing, file a claim with the carrier before accepting.
7. Do not return material to you authorized distributor without a letter of explanation. Make a list of all returned parts, show your name and address, and include it with the shipment. Transportation charges must be prepaid.

## Lesson: Ordering Parts

1. Write your name and company address, complete with city, state and zip code here:_____

_____

2. How should the part be sent? by mail? UPS? or another method?

_____

3. To whom should the part be sent? to you? to your supervisor? to a particular department?_____

_____

4. Using the parts catalog, look up the product number, name, and serial number of the part you want. Write it here:_____

_____

5. How many parts to you need? what is the part number? how is it described? Write that information here:_____

_____

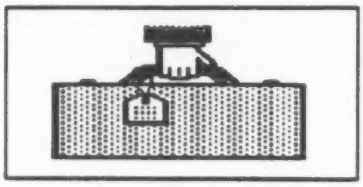
_____

6. What is the address of the closest authorized distributor? Write it here._____

_____

7. Pretend that the part you ordered arrived damaged. Write a short letter on a separate sheet of paper explaining what is wrong with the part.

# Case Study #5
# Designing a Lesson Plan



Imagine that you are going to provide a basic skills program for rental agents for a 300 unit apartment complex. These rental agents have high school diplomas and most of them speak English as a second language. Their first language is Spanish. The agents must fill out application forms for any interested prospective tenant. The applicants also speak English as a second language. The employing firm, a national property management firm, insists that the rental application form (see below) is filled out properly--and in English.

You have determined that many of the rental agents are uncomfortable with the form and its vocabulary. They are also uncomfortable asking these questions of prospective tenants for a variety of reasons.

RENTAL APPLICATION

Name
Social Security Number
Driver's License Number
Home Phone: Work Phone:
Present Address:
How long at this address? Rent $: Reason for moving:
Owner manager:
Previous Address:
How long at this address? Rent $: Reason for moving:
Owner manager:
Name and relationship of every person to live with you (including any minor children):

Any pets? Describe: Waterbed?
Occupation: Employer: Phone:
How long with this employer? Supervisor:
Previous occupation: Employer: Phone:
How long with this employer? Supervisor:
Current gross income per month: $
List sources of income other than present employment above:

Savings acct: Bank: Account number:
Checking acct: Bank: Account number:
Major credit card: Account number:
Credit reference: Account number:
Have you every filed bankruptcy? Have you ever been evicted?
Vehicles: Make Model Year License
Reference: Address Phone
Contact in emergency: Phone
I declare the above statements are true and correct, and I hereby authorize verification of references given and a credit check._____(signature)



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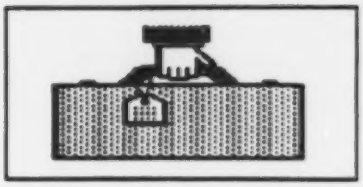
Design a lesson plan that would deal with one competency needed to complete the rental form on the previous page.

- Competency to be mastered:
- Time allowed and time of day
- Climate-setting activities
- Number and type of students/workers involved
- Materials needed
- Physical facilities and financial resources
- Presentation strategies
- Sequencing of lessons
- Instructor preference or expertise
- Evaluation of lesson

# Case Study #6
# Designing a Lesson Plan



Imagine that you are going to provide basic skills training to lawn equipment operators. These workers have high school diplomas or an equivalent. Many read at the 8th grade level and a few read below 8th grade.

The employer offers minimal training. On occasion, equipment operators must fill out forms to order replacement parts. Look again at the instructions for ordering parts:

### How to Order Repair Parts

**To eliminate error and speed delivery:**

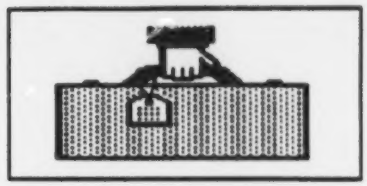
1. **Write your name and address on your order plainly.**
2. **Explain where and how to make shipment.**
3. **Give product number, name and serial number that is stamped on the nameplate or serial plate of your product.**
4. **Order by quantity desired, the part number and the description of the part.**
5. **Send your order to us or visit your neared authorized distributor.**
6. **Inspect all shipments on receipt. If any parts are damaged or missing, file a claim with the carrier before accepting.**
7. **Do not return material to you authorized distributor without a letter of explanation. Make a list of all returned parts, show your name and address, and include it with the shipment. Transportation charges must be prepaid.**

Design a lesson plan that would deal with one competency needed to comprehend the document on the previous page.

- Competency to be mastered:
- Time allowed and time of day
- Climate-setting activities
- Number and type of students/workers involved
- Materials needed
- Physical facilities and financial resources
- Presentation strategies
- Sequencing of lessons
- Instructor preference or expertise
- Evaluation of lesson

See the following appendix for possible answers to this exercise.

# Case Study #7
# Designing a Lesson Plan



Imagine that you are going to provide a workforce education program to 16 cashiers. The cashiers are young women and all have high school diplomas or an equivalent. Half of the tellers speak English as a second language.

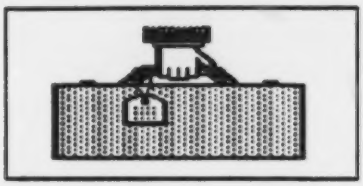
Cashiers must be able to give correct change in a cash purchase.

Design a lesson plan that would deal with one competency needed to deal with this problem.

- Competency to be mastered:
- Time allowed and time of day
- Climate-setting activities
- Number and type of students/workers involved
- Materials needed
- Physical facilities and financial resources
- Instructional strategies
- Sequencing of lessons
- Instructor preference or expertise
- Evaluation of lesson

See suggested answers to this case study at the end of this handbook.

## Case Study #8
## Designing a Lesson Plan



Examine your workplace for printed material.

Create a list of vocabulary terms from these printed materials that might be unfamiliar to a person who lacks basic skills.

•

•

•

•

•

•

•

•

How might you design a lesson to help a worker comprehend these vocabulary terms?

- Competen / to be mastered:
- Time allowed and time of day
- Climate-setting activities
- Number and type of students/workers involved
- Materials needed
- Physical facilities and financial resources
- Instructional strategies
- Sequencing of lessons
- Instructor preference or expertise
- Evaluation of lesson

Design a worksheet using the information found on a job task board below. The following are written instructions for workers in the golf and grounds maintenance department.

LONG HOURS
NEXT WEEK!

Baytown

Mike
Danny
Jim
> greens/A/caps/
cleanup

Larry
Ron
Scott
> Trees/
collars (cc)

John
Robert
> traps

Links

David
Bo
> green/
TR/
cleanup

Bob
Frank
> tee/
w/
collars/
cc

Jim
Ron
> traps/
push
lips

Suggested answers to this case study may be found at the end of this handbook.



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## What's Next

The purpose of this handbook is to help the curriculum planner perform a basic skills needs analysis and to develop curriculum based on the information gathered.

Once the curriculum has been planned, much work still remains. The planner must motivate workers to attend the program by marketing the course effectively. Then, participants for the program must be recruited from the workforce. Once enrolled in the program, teachers must be selected and trained to deliver the lessons. All during this process, the curriculum must be evaluated again.

After the program is over, participants and supervisors should be asked to provide feedback so that the program can be improved. This process never ends because refinements are always necessary in the face of the dramatic changes taking place in the workplace.

Some examples of evaluation forms follow.

## Student Evaluation Form

Circle the appropriate answer:

1. This class has helped me speak English at work:

   a lot  some  a little  not at all

2. This class has helped me to understand English at work:

   a lot  some  a little  not at all

3. This class has helped me to improve my job:

   a lot  some  a little  not at all

4. This class was _____ for me.

   too easy  too hard  exactly right

5. I need to practice _____more.

   conversation  comprehension  pronunciation

6. What I liked about the class was_____
_____

7. What I did not like about the class was _____
_____

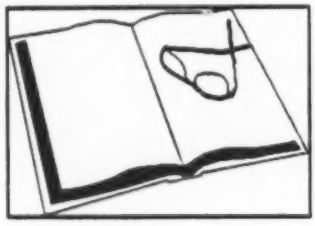
8. Because of this class, now I can do these three things better:
_____

**Supervisor Evaluation**

**The worker/student at the end of the course can**

| | cannot perform | performs adequately | performs well |
|---|---|---|---|
| 1. describe the path of raw materials from receiving to shipping. | 1 | 2 | 3 |
| 2. identify company departments and functions. | 1 | 2 | 3 |
| 3. identify our products. | 1 | 2 | 3 |
| 4. describe job duties. | 1 | 2 | 3 |
| 5. describe tools and machines used on the job. | 1 | 2 | 3 |

To help curriculum planner with the task of facing perpetual change, a selected reference list is provided at the end of this handbook.



## References for this Handbook

## References for this Handbook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Guglielmino, Lucy Madsen. (1991). *Proceedings of the Florida Workplace Literacy Conference*. Boca Raton, FL: Florida Atlantic University.

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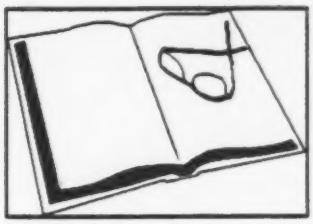
Workplace literacy program. *ERIC Digest No. 70*. In Mrowicki, Linda (1993), *Workforce Literacy Task Analysis and Curriculum Adaptation Workshop Handbook*. West Palm Beach, FL: Florida Literacy Coalition.



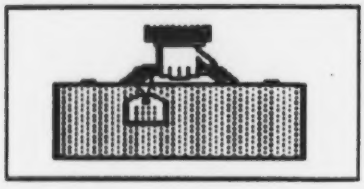
## Appendices

**Answer to the Case Studies**

**Selected Student Workplace Texts**

**Books and Government Documents on Literacy**

# Answers to Case Studies



## Case Study 1

Wooly Winter Catalog Company is a large clothing catalog company. Most of their business orders are made by phone. Customers call on a national 1-800 telephone line and talk to a service representative who takes their order, their billing address, and their shipping address. The representative then keys the information into a computer which calculates the charges and prints out the order. There are 20 service representatives.

Wooly Winter Catalog Company has a shipping department with 12 full-time employees. Shippers must process the orders taken by the service representatives and box and label the orders appropriately. Shippers must also identify weight and appropriate postage necessary.

This company also has an inventory department whose workers must receive, identify and organize stock.

Most of the positions at this company can be described as entry level. The minimum education accepted is a high school degree. Many of the employees speak English as a second language. Many are recently hired employees and this is their first job after graduating. Each new employee receives several hours of training in how to use the computer to take, receive, and process orders.

*What key personnel might you want to interview to obtain more specific information about the company, its workforce, and potential problems?*

- personnel director
- plant manager
- direct supervisor
- union official (if available)
- training director
- workers

**(Other answers are possible.)**

*What questions would you ask the plant manager of this firm?*

- What are the responsibilities of a service representative? Do you have a written job description?
- What reading skills are required for a service representative to do a good job?
- What writing skills are required for a service representative?
- What math skills does a service representative need to do the job?
- How do the shippers and the service representatives interact?
- What is your role?
- How do the shippers and service representatives learn their jobs?

**(Other answers are possible.)**

*What perspective would the plant manager have that other personnel at Wooly Winter Catalog Company might not have?*

- The plant manager gets to see all the workers work as individuals and as a team.
- The plant manager has an opportunity to see training needs as they influence the workplace.

**(Other answers are possible.)**

*What questions would you ask the direct supervisor of the customer representatives?*

- Do you teach the customer service representatives what they need to know to fulfill the job?
- If you do not teach the representatives, who does?
- What methods are used to teach the representatives the necessary skills?
- Do any of these skills require reading, writing, and/or mathematics?
- How would you describe the level of your representatives' basic skills?
- Have you noticed any problems related to basic skills that affect the performance of a customer representative?
- How many of your workers speak English as a second language?

**(Other answers are possible.)**

*What perspective would the direct supervisor of the service representatives have that other personnel at Wooly Winter Catalog Company might not have?*

- The direct supervisor sees the workers on a daily basis.
- The direct supervisor knows the basic skills needs as they relate to job performance.

**(Other answers are possible.)**

## Case Study 2

*Select a simple job task which you do regularly in your job or at home. Describe the task by providing the information asked for below. Provide as much detail as possible.*

Task name: Cooking dinner

Task description: (Describe the task in general, stating its purpose and desired results):

Preparing a three course meal, including salad or vegetable, starch, and a meat--so that my family receives a healthy, nutritious meal at dinner time.

*List of print materials: (list the printed resources you use to help you complete this task--for example, forms, reference manuals, books, notes,etc.)*

- recipe books or cards
- oven and microwave oven guide

*List of writing tasks (What are the writing tasks you do in order to complete this work--for example, forms to fill in, memos or notes):*

- I sometimes have to make notes in the recipe book or card about additions or deletions to the recipe.

*List of math tasks (list any math required to complete this task):*

- I must be able to calculate amounts in terms of teaspoons, tablespoons, etc.
- I have to calculate portions.
- At the grocery store, I have to calculate costs of food preparation.

*List of any interpersonal skills: (list any oral skills in order to complete this task--for example, talk on the phone, answering questions, listening)*

- I sometimes ask for directions over the phone for a recipe.
- I sometimes consult a family member about the choices of foods for dinner.

## Case Study 3

*Imagine that you work for a medium-size manufacturing plant. The company produces paper products. What might be core competencies in reading that workers must be able to perform in the event of a fire on the premises?*

- read the directions to use a sprinkler
- read the directions to use a chemical extinguisher
- read the exit sign and map
- read the directions for donning fireproof equipment

**(Other answers are possible.)**

*Imagine that you are an order-taker and cashier at a fast-food restaurant. What are some mathematics competencies that you might need to complete an order?*

- adding the bill
- calculating the number of drinks
- subtracting changed orders
- making change
- recognize different charges for different orders

**(Other answers are possible.)**

## Case Study #4

*Create a basic skills task analysis for any job with which you are familiar.*

Job position: Domestic engineer (male or female)
Task: Preparing dinner

**Job sub-tasks**

1. Choosing appropriate foods
    - 1.1 Reading labels
    - 1.2 Recognizing vocabulary: vitamins, additives, etc.
    - 1.3 Calculating portions per family members
    - 1.4 Budgeting for particular food items

2. Prepare vegetable or salad
    - 2.1 Follow safety procedures with utensils and instruments
    - 2.2 Weigh or apportion food
    - 2.3 Calculate/weigh seasoning
    - 2.4 Read directions on recipe card or in book

3. Prepare starch (potato, rice, bread)
    - 3.1 Follow safety procedures with utensils and instruments
    - 3.2 Weigh or apportion food
    - 3.3 Calculate/weigh seasoning
    - 3.4 Read directions on recipe card or in book
    - 4.4 Calculate time for readiness

4. Prepare meat
    - 4.1 Follow safety procedures with utensils and instruments
    - 4.2 Weigh or apportion food
    - 4.3 Calculate/weigh seasoning
    - 4.4 Read directions on recipe card or in book
    - 4.5 Calculate time for readiness
5. Serve
    - 5.1 Use appropriate social language and etiquette

(Other answers are possible.)

## Exercise on page 61.

- *Instructional goal*: By the end of a five hour program, workers will be able to use appropriate oral English to describe their job tasks.

  - Workers will use appropriate work terms to describe their job tasks

  - Workers will avoid ungrammatical constructions such as

    double negatives

    subject-verb disagreement

  - Workers will avoid annoying speech mannerisms, such as

    "you know"

    "whaddya think?"

  - Workers will recognize the differences between formal and informal English and use them appropriately in different settings.

**(Other answers are possible.)**

## Case Study # 5

*Imagine that you are going to provide literacy programs for rental agents for a 300 unit apartment complex. These rental agents have high school diplomas and most of them speak English as a second language. Their first language is Spanish. The agents must fill out application forms for any interested prospective tenant. The applicants also speak English as a second language.*

*The employing firm, a national property management firm, insists that the rental application form (see text) is filled out properly--and in English. You have determined that many of the rental agents are uncomfortable with the form and its vocabulary. They are also uncomfortable asking these questions of prospective tenants for a variety of reasons.*

*Design a lesson plan that would deal with one competency needed to complete the rental form.*

| | |
|---|---|
| • Competency to be mastered: | Rental agents will ask be able to define all key terminology on the rental application form (e.g., "current gross income," "occupation," "employer.") |
| • Time allowed and time of day: | 3 hours; morning |
| • Climate-setting activities: | Students are asked, "What are the questions prospective tenants ask you that you are concerned about?" 15 minutes will be allowed for discussion. |
| • Number and type of workers involved: | 8 female rental agents; all between the ages of 18 and 40; all speak English as a second language. Spanish is their first language. |
| • Materials needed: | Copies of the rental form and vocabulary worksheets. 8 dictionaries. |
| • Physical facilities and financial resources: | Main office conference room. Budget provided by management. |
| • Instructional strategies: | Role play rental agent and prospective tenant involving three different tenants: a construction worker with his girlfriend; a married couple with 3 children; and a single women. Ask students to volunteer to do one of these in Spanish. Have a vocabulary worksheet and dictionary for written practice. |
| • Sequencing of lessons: | This is the third lesson of the program. The first two lessons were filling out company personnel forms. The lesson following is on understanding body language. |
| • Instructor preference or expertise: | Teacher-directed activity. |
| • Evaluation of lesson: | Students will be put in pairs and now role-play the rental agent asking questions of the prospective tenant and filling out the forms. Then the students will switch roles. |

**(Other answers are possible.)**

## Case Study #6

*Imagine that you are going to provide basic skills training to lawn equipment operators. These workers have high school diplomas or an equivalent. Many read at the 8th grade level and a few read below 8th grade. The employer offers minimal training. On occasion, equipment operators must fill out forms to order replace parts. (Review the form on page 92).*

| | |
|---|---|
| • Competency to be mastered: | Reading a parts ordering book. |
| • Time allowed and time of day: | 3 hours; morning |
| • Climate-setting activities: | Students are asked to scan the parts ordering book, particularly the index and table of contents. |
| • Number and type of workers involved: | 10 lawn equipment operators. |
| • Materials needed: | Parts ordering book; order blanks; nameplates from equipment. |
| • Physical facilities and financial resources: | Main office conference room. Budget provided by management. |
| • Instructional strategies: | Have students recognize parts by name and/or serial number--students will point these out.<br>Students will identify index of parts catalog and practice using the index.<br>Students will locate various items in parts catalog and transfer information onto order blank. |
| • Sequencing of lessons: | This is the fourth lesson of the program. The first three lessons were filling out company personnel forms. |
| • Instructor preference or expertise: | Teacher-directed activity. |
| • Evaluation of lesson: | Students will turn in correct order blank forms. |

**(Other answers are possible.)**

## Case Study #7

*Imagine that you are going to provide a workforce education program to 16 cashiers. The cashiers are young women and all have high school diplomas or an equivalent. Half of the cashiers speak English as a second language. Cashiers must be able to give correct change in a cash purchase properly.*

| | |
|---|---|
| • Competency to be mastered: | Giving correct change. |
| • Time allowed and time of day: | 3 hours: morning |
| • Climate-setting activities: | Students are asked to identify different coins and their value. |
| • Number and type of workers involved: | 16 cashiers |
| • Materials needed: | paper and coin money |
| • Physical facilities and financial resources: | Main office conference room. Budget provided by management. |
| • Instructional strategies: | Students will respond to the instructor calling out different amount of money by setting aside appropriate coins. Students will count up to $1.00 using different coin combinations. Students will role-play customer and cashier and give change on purchases up to $10.00. |
| • Sequencing of lessons: | This is the fourth lesson of the program. The first lessons were arithmetic worksheets involving subtraction. |
| • Instructor preference or expertise: | Teacher-directed activity. |
| • Evaluation of lesson: | Students will make correct change from purchases $10.00 or less by counting out proper change to instructor or classmates. |

**(Other answers are possible.)**



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## Case Study #8

*Examine your workplace for prinied material. Create a list of vocabulary terms from these printed materials that might be unfamiliar to a person who lacks basic skills.*

(from the safety warnings section of a lawn equipment manual)

- auxiliary
- neutral
- components
- pressurized
- function
- modify
- disengage
- terrain
- hazards
- foreign object
- engine governor
- operate

| | |
|---|---|
| • Competency to be mastered: | Read safety warnings |
| • Time allowed and time of day: | 2 hours; afternoon |
| • Climate-setting activities: | Students are asked to read this section to themselves |
| • Number and type of workers involved: | 10 lawn equipment operators |
| • Materials needed: | safety section of the manual; worksheets; dictionary |
| • Physical facilities and financial resources: | Main office conference room. Budget provided by management. |
| • Instructional strategies: | Students will work in small groups to look up the unfamiliar words and their pronunciation. Students will then fill out the worksheet. If time, students will use these terms by creating their own warning statements. |
| • Sequencing of lessons: | This is the fifth lesson of the program. The first lessons were reading other parts of the manual. |
| • Instructor preference or expertise: | Teacher-directed activity. |
| • Evaluation of lesson: | Students will turn in a worksheet with correct information. |

**(Other answers are possible.)**

Design a worksheet using the information found a job task board (see page 97.)

Student Worksheet

Use the job board to answer these questions:

1. Words that every worker must know in order to read and understand the daily job board.

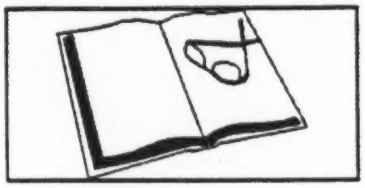
2. Abbreviations that supervisors use to write job assignments are:

| abbreviation | word |
| --- | --- |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

3. On the board today, Mike, Danny, and Jim will_____
_____
_____.

4. John and Robert are responsible for_____
_____
_____.

5. What will David and Bo do today?_____
_____
_____.



## Selected Student Workplace Texts

| | |
|---|---|
| Author | Elsa Roberts Auerbach and Nina Wallerstain |
| Title | *ESL For Actions* |
| Publisher | Addison-Wesley Publishing Co., 1987 |
| Author | Marianne Brems |
| Title | *Working in English Book 2* |
| Publisher | Contemporary Books, 1990 |
| Author | Lloyd Brooks |
| Title | *Math for Workplace Success General Business* |
| Publisher | Paradigm Publishing, 1991 |
| Author | Lloyd D. Brooks |
| Title | *Reading for Workplace Success: General Business* |
| Publisher | Paradigm Publishing, 1991 |
| Author | Caleb E. Crowell |
| Title | *Math for the World of Work* |
| Publisher | Educational Design, Inc., 1991 |
| Author | Susan Eachaore-Yoon |
| Title | *Reading Skills That Work Books 1 and 2* |
| Publisher | Contemporary Books, 1991 |
| Author | David Hemphill, Barbara Pfaffenberger, Barbara Hockmann |
| Title | *The Working Culture Books 1 and 2* |
| Publisher | Prentice Hall Regents, 1989 |

| | |
|---|---|
| Author | Dr. Stuart Marguies |
| Title | *Jobs 2000* |
| Publisher | Educational Design, Inc. 1990 |

| | |
|---|---|
| Author | Larry Mikulecky and Rad Drew |
| Title | *On the Job: Readings in Real-Life Competencies, Books 1, 2,3* |
| Publisher | Cambridge Book Company, 1987 |

| | |
|---|---|
| Author | Dawn Mosenfelder |
| Title | *Vocabulary for the WOrld of Work, I and II* |
| Publisher | Educational Design Inc., 1987 |

| | |
|---|---|
| Author | Linda Mrowicki |
| Title | *Let's Work Safely! English Language Skills for Safety in the Workplace* |
| Publisher | Linmore Publishing, 1984 |

| | |
|---|---|
| Author | Larry Parsky, Ph.D. |
| Title | Math for Employment: Basic Money Skills |
| Publisher | Educational Design Inc, 1991 |

| | |
|---|---|
| Author | Larry Parsky, Ph.D. |
| Title | *Math for Food Service Occupations* |
| Publisher | Educational Design, Inc. 1991 |

| | |
|---|---|
| Author | David Prince and Julia Gage |
| Title | *English for Your First Job* |
| Publisher | Prentice Hall, 1981 |

| | |
|---|---|
| Author | Catherine Robinson and Jenise Rowekamp |
| Title | *Speaking Up at Work* |
| Publisher | Oxford University Press, 1985 |

| | |
|---|---|
| Author | Lynn Robinson |
| Title | *A Picture Based Approach for the World of Work* |
| Publisher | Contemporary Books, 1991 |

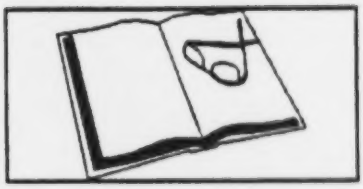
| | |
|---|---|
| Author | L. Robinson and M. Barns |
| Title | Working in English, Books 1 and 2 |
| Publisher | Contemporary Books, 1991 |

| | |
|---|---|
| Author | Allan D. Suter |
| Title | *Number Sense: Discovering Basic Math Concepts* |
| Publisher | Contemporary Books, 1990 |

| | |
|---|---|
| Author | R. Lois Teal |
| Title | *Building Success in the Workplace* |
| Publisher | Steck-Vaughn Co., 1990 |

| | |
|---|---|
| Author | Robert Ventre Associates |
| Title | *Mastering Reading, Skills for Success, Manufacturing Books 1, 2, 3, 4* |
| Publisher | Delmar Publishers, Inc., 1991 |

| | |
|---|---|
| Author | Frances A. Wiser |
| Title | *Ready to Work: Winning at the Job Game* |
| Publisher | Contemporary Books, 1991 |



## BOOKS AND GOVERNMENT DOCUMENTS ON LITERACY

| | |
|---|---|
| Title | *An assessment of the federal initiative in the area of adult literacy: staff report of the Subcommittee on Elementary Secondary, and Vocational Education of the Committee on Education and Labor, U.S. House of Representatives, One-hundredth Congress.* |
| Publisher | Washington: U.S. G.P.O.: For sale by the Supt. of Docs., Congressional Sales Office, U.S. G.P.O., 1987. |
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